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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,101	12/31/2001	Xiaolin Lu	TI-33448	5862
23494	7590	04/05/2006	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			WILSON, ROBERT W	
P O BOX 655474, M/S 3999			ART UNIT	
DALLAS, TX 75265			PAPER NUMBER	

2616

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/037,101

Applicant(s)

LU ET AL.

Examiner

Robert W. Wilson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 25-40 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-12 and 19-24 is/are allowed.
- 6) ☒ Claim(s) 1,2,6 and 13-15 is/are rejected.
- 7) ☒ Claim(s) 3-5,7 and 16-18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Traverse of Restriction

1. Applicant's election of 1-24 in the reply filed on 3/2/06 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. The examiner will treat claims 25-40 withdrawn from the examination process.

Claim Objections

3. Claims 3-5, 7, & 16-18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Allowable Subject Matter

4. Claims 8-12 & 19-24 are allowed.

The closest prior art is Hui (U.S. Patent No.: 6,470,057). Hui teaches that a base station sends a timing reference built into a packet. The packet is received by the Terminal which has determined an expected arrival time and compares the value to the actual arrival time. The terminal does not send back an acknowledgment packet with the expected arrival time nor does the base station store the expected arrival time.

The following is an Examiner's statement of reasons for allowance:

Claims 8-12 & 19-24 are considered allowable since when reading the claims in light of the specification, none of the references of record alone or in combination disclose or suggest the combination of limitations specified in the independent claims including:

“the system stores a received time relative to the timing , the receive time being indicative of a time that the packet is expected to be received by the receiver and an acknowledgment resolving

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component that extracts an acknowledgement time from an acknowledgement and determines if the acknowledgement time corresponds to the receive time of the packet, as specified in claims 8 & 19

“means for recording a time at which the packet is expected to be received” as specified in claim 24.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Hui (U.S. Patent No.; 6,470,057).

Referring to claim 1, Hui teaches: A wireless communication system per Fig 1. A Base Station (12 per Fig 1) or sender sends a packet as shown in Fig 2. The Base Station 12 per Fig 1 has an inherent time signal generator which sends the packet per Fig 1 which has a pre reception time and reception time or timing reference per col. 4 lines 1-32 which are sent to the terminal or receiver per Fig 1 The mobile has a Timing Estimator 30 per Fig 3 that determines the delta or delay associated with propagation delay per col. 4 line 25 or ranging offset determiner. The mobile uses the delta value to adjust the timing reference in the terminal or receiver to be in sync with the base or sender per col. 4 line 40-col. 5 line 24.

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7. Claim 13 is rejected under 35 U.S.C. 102(e) as being anticipated by Lundh (U.S. Patent No.; 6,577,872).

Referring to claim 13, Lundh teaches: Fig 1 is a packet receiving system which receives packet per Fig 10. The STU per Fig 1 has timer which is inherently in sync with MTU per Fig 1 or sender.

The STU has an inherent acknowledgment generator which generates a packet with a value of T2 which is a timestamp value based upon when the packet with T1 was received by the STU and an acknowledgment packet with T1, T2, & T3 is sent back to MTU as shown per Fig 10.

In Addition Lundh teaches:

Regarding claim 14, the MTU per Fig 1 has an inherent delay determiner which the examiner interprets as range offset determiner. The system utilizes the values of T1 and T2 in order to compute the transmission delay between the MTU and STU in order to determine a synchronization adjustment value per col. 4 line 29-53

8. Claim 15 is rejected under 35 U.S.C. 102(e) as being anticipated by Norman (U.S. Patent No.; 6,366,786).

Referring to claim 15, Norman teaches: Fig 3 is a frame or packet receiving system per col. 3 lines 38-44. The base station establishes a synchronization signal based upon timing unit or base time per col. 2 lines 15-52. The mobile computes a time difference between the mobile and base station timing or range offset per col. 3 line 12-col. 4 line 16. The mobile station adjusts its counter or synchronizes its time with the time received from the base per col. 3 line 12-col. 4 line 16.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hui (U.S. 6,470,057 B1) in view of Taylor (US 2002/0131398).

Referring to claim 2, Hui teaches: the system of claim 1, Hui does not expressly call for: where the timing reference is a 32 bit global timing reference. Taylor teaches: 32 bit global timing reference is used for synchronization between a transmitter and receiver per Pg 3 Para [031].

It would have been obvious to one of ordinary skill in the art at the time of the invention to add the 32 bit global timing reference of Taylor as the format for the timing reference of Hui in order to be standards compliant in providing synchronization timing between a sender and receiver.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hui (U.S. 6,470,057 B1)

Referring to 6, Hui teaches: the system of claim 1 and the receiving being a wireless modulator 926 per Fig 3) and demodulator (22 per Fig 3) or modem. Hui does not expressly call for: sender being a wireless access modem. Hui teaches that the base station and terminal or receiver are able to send the same frame structure per col. 4 lines 33-35. It would have been obvious to one of ordinary skill in the art at the time of the invention that the base station or sender which is inherently an access device would also have a modulator and demodulator or modem just like

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those shown in the terminal of Figure 3 in order for the invention to work by send frames in the same frame structure.

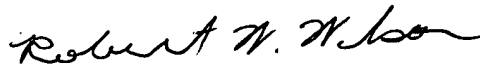
Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Wilson whose telephone number is 571/272-3075.

The examiner can normally be reached on M-F (8:00-4:30).

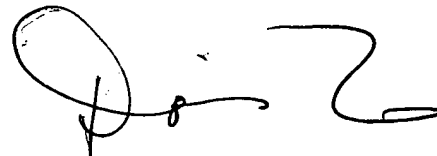
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571/272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Robert W Wilson
Examiner
Art Unit 2616

RWW
3/28/06



DORIS H. TO
SUPERVISOR, PATENT EXAMINER
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